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Examiner Marianne DiBrino
Art Unit 1644
at Fax No. 1-703-305-3704

PATENT

Attorney Docket No.: 18623-005091US
Client Reference No.: EPI 0050.91US

On 2 June 2000

TOWNSEND and TOWNSEND and CREW LLP

By: Marianne DiBrino

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Kubo *et al.*

Application No.: 09/017,524

Filed: February 3, 1998

For: HLA BINDING PEPTIDES AND
THEIR USES

Examiner: Marianne DiBrino

Art Unit: 1644

RESPONSE TO RESTRICTION
REQUIREMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Restriction Requirement mailed May 8, 2000, please enter the following amendments and remarks.

Please amend the application as follows.

IN THE SPECIFICATION:

On page 1, please delete lines 2-8 and insert therefor:

--The present application is a continuation-in-part (CIP) of co-pending U.S.S.N. 08/347,610, filed 12/1/94, which is a CIP of U.S.S.N. 08/159,339, filed 11/29/93 and now U.S. Patent 6,037,135, which is a CIP of U.S.S.N. 08/103,396, filed 8/6/93, now abandoned, which is a CIP of U.S.S.N. 08/027,746, filed 3/5/93, now abandoned, which is a CIP of U.S.S.N.

08/926,666, filed 8/7/92, now abandoned. The present application also claims priority to U.S.S.N. 08/589,107, filed 1/23/96, and now abandoned. The present application is also related to U.S.S.N. 08/821,739 filed 3/20/97, which claims priority to abandoned U.S.S.N. 60/013,833 filed 3/21/96; U.S.S.N. 08/451,913, filed 5/26/95, now abandoned; U.S.S.N. 08/758,409, filed 11/27/96, now abandoned; and U.S.S.N. 08/186,266, filed 1/25/94, now U.S. Patent 5,662,907. All of the above applications are incorporated herein by reference.--

REMARKS

1. Amendment to the specification.

This amendment adds no new matter as all of the applications were listed and incorporated by reference at page 1, lines 2-8 in the application as filed. The present amendment also further clarifies the priority and updates the status of the related applications.

2. Species election requirement.

In the Office Communication mailed May 7, 2000, the examiner has imposed additional species election requirements. As a formal matter, Applicants elect the following species with the understanding that upon the determination that the elected species is free of the prior art, additional species will be examined in accordance with MPEP § 803.02, which states that "should no prior art be found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended." and that "The prior art search will be extended to the extent necessary to determine the patentability of the Markush-type claim."

Accordingly, Applicants elect, with traverse, the following: an epitope consisting of about 9 amino acid residues; an immunogenic peptide linked to a molecule to create a compound; a motif residue at position two of the epitope that is A; and a motif residue at the carboxy terminus of the epitope that is K. The claims that read on the elected species of 9 amino acid residues and motif residues A at position 2 and K at the carboxy terminus are claims 68-70. Claims 68 and 70 read on the elected species of an immunogenic peptide linked to a molecule to create a compound.

The species election is traversed. Applicants submit that the species election requirement disregards key aspects of the invention and does not provide for examination of

the invention as disclosed and claimed by the Applicants. It is improper for the Office to refuse to examine that which applicants regard as their invention (MPEP § 803.02, relating to Markush claims). Though the subject restriction requirement is for a species election which does not *per se* preclude examination of the scope of the generic claims in this application, the dissection of the claims in the manner of the Office Action could potentially prolong prosecution by directing focus to less critical characteristics that may not even be significant elements of the actual invention. For example, where a particular sequence of 9 amino acids in length having an A at position 2 and K at the carboxy terminus is examined, the "motif" aspect of the invention is not being examined. The motif is a key aspect of Applicants' invention as set out in the claims. "[T]he scope of subject matter of an invention is governed not by the examiner's conception of the invention, but by that which the applicant regards as his invention" *In re Wolfrum* 179 USPQ 620 (C.C.P.A. 1973) (addressing a 35 U.S.C. § 112 rejection). Similarly, the requirement to elect a peptide linked to an additional molecule or a peptide that is not linked, ignores the motif aspect of the invention.

Furthermore, the claims could be examined together and no unduly extensive and burdensome search would be necessary (MPEP § 808.01(a)). For a given motif, no undue examination burden is imposed by examining one of L, M, V, I, S, A, T, F, C, G, or D at position two, and a K, Y, R, H, or F residue at each of positions 8, 9, 10, and 11, *i.e.*, the C-terminus of HLA class I epitopes. Computer searching techniques readily permit the searching of sequences representing designated amino acids at positions of choice. Such a search is not unduly extensive, but is thorough and properly includes the relevant motif species of a residue at a position two and a specified residue at any C terminal position. Moreover, for teachings related to peptides that bind to HLA class I molecules, it is prudent to consider C-terminal positions of epitopes which are 8, 9, 10, or 11 residues long, to get a truly comprehensive view of this art. Logic dictates that a typical computer search of the claimed motif would necessarily reveal any art related to peptides that are of different lengths.

Another, preferred example of a species that conforms to a "motif-based" election requirement would be a peptide comprising an epitope possessing one of the eleven residues specified at position two (L, M, V, I, S, A, T, F, C, G, or D). That residue, in conjunction with any of the defined residues K, Y, R, H, or F at the C-terminus of the epitope,

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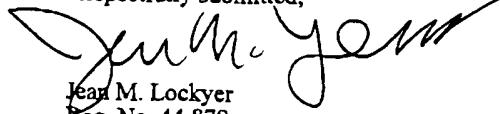
is the motif. This approach leads to not more than 11 species of the invention. Examination of any one of these eleven species properly focuses the prosecution of the application on the specified motif or residue pattern of the immunogenic peptide that induces a cytotoxic T cell response. Thus, election of any one of these species results in examination of the invention in its totality as disclosed and claimed.

In view of these remarks, Applicants respectfully request withdrawal of the species election requirement.

CONCLUSION

If the Examiner has any questions regarding the amendment or believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200 or Timothy J. Lithgow at 619-860-2514.

Respectfully submitted,



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